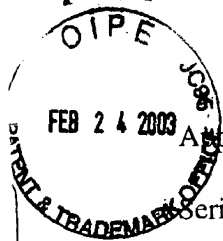


## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant: Tanuma et al.

Serial No. 09/282,772

Filed: March 31, 1999

For: LIQUID CRYSTAL DISPLAY  
DEVICE OPERATING IN A  
VERTICALLY ALIGNED  
MODE OF LIQUID CRYSTAL  
MOLECULES

Art Unit: 2871

Examiner: Qi, Z.

Commissioner for Patents  
Washington, D.C. 20231

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United States Postal Service as FIRST-CLASS mail in an  
envelope addressed to: Commissioner for Patents,  
Washington, D.C. 20231, on this date.

February 17, 2003

Date

Registration No.

Attorney for Applicant

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AMENDMENT TRANSMITTAL

Dear Sir:

Transmitted herewith is a communication regarding the above-identified application.

Fee Calculation For Claims As Amended

	As Amended	Previously Paid For	Present Extra	Rate	Additional Fee
Total Claims	4	20	0	\$18.00	\$ -0-
Independent Claims	3	3	0	\$84.00	\$ -0-
Fee for Multiple Dependent Claims				\$280.00	\$ -0-
			Total Additional Fee		\$ -0-
			Small Entity Fee (reduced by half)		\$ -0-

(X) Response C

(X) Petition for Extension of Time (in duplicate) with a check for \$110.00

(X) If a Petition under 37 C.F.R. §1.136(a) for an extension of time for response is required to make the attached response timely and does not separately accompany this transmittal, Applicant(s) hereby petition(s) under 37 C.F.R. §1.136(a) for an extension of time for response in the above-identified application for the period required to make the attached response timely.

(X) The Commissioner is hereby authorized to charge any additional fees which may be required to this application under 37 C.F.R. §§1.16-1.17, or credit any overpayment, to Deposit Account No. 07-2069. A duplicate copy of this sheet is enclosed.

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GREER, BURNS &amp; CRAIN, LTD.

By:

Josh C. Snider, Reg. No. 47,954

0941.63006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

#16/Response  
3-6-03  
R. Diado  
N.E.

Applicant: Tanuma et al.

Serial No.: 09/282,772

Filed: March 31, 1999

For: LIQUID CRYSTAL DISPLAY  
DEVICE OPERATING IN A  
VERTICALLY ALIGNED  
MODE OF LIQUID CRYSTAL  
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Patents, Washington, D.C. 20231, on this date.

February 17, 2003  
Date

Registration No. 47,954  
Attorney for Applicants

RESPONSE C

Box AF  
Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

In response to the final Office Action mailed October 18, 2002, please consider  
the following remarks:

REMARKS

Because all of the outstanding rejections in the present Office Action (Paper  
No. 14) are merely repeated from the previous Office Action, Applicants maintain and  
incorporate by reference herein those arguments previously advanced on pages 4 through 9 of  
Amendment B, filed June 11, 2002. Applicants respectfully request that the Examiner  
reconsider those arguments in full, and withdraw the outstanding Section 103 rejections.

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Additionally, Applicants respectfully request that the Examiner consider the following new arguments, and expansions upon the previous arguments.

Applicants further traverse the outstanding Office Action as being not fully responsive. The Examiner stresses that Applicants' "only" arguments consist entirely of three cited lines of text, instead of the five pages of substantive arguments which were actually included in Amendment B. It is inappropriate for the Examiner to suggest and emphasize that these five pages of arguments -- most of which remain unrebutted -- can be reduced to merely three short lines. Applicants respectfully submit that, after reviewing all of these previous arguments, the Examiner should find this case in condition for allowance.

Claim 1 again stands rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Admitted Prior Art ("the AAPA") in view of Walton et al. (U.S. 6,201,588) and Lien (U.S. 5,907,380). Applicants respectfully traverse this rejection for the reasons of record, and as follows. None of the cited references, whether taken alone or in combination, disclose or suggest first and second projections provided on first and second electrodes respectively, or that such electrodes are made of metal.

As previously discussed, and as acknowledged by the Examiner, neither the AAPA nor Walton even teach or suggest projections provided on electrodes. Only Lien has been cited for teaching projections formed on electrodes. Lien, however, fails to teach or suggest that two different projections are formed on two different respective electrodes, or that the electrodes are both made of metal.

The Examiner has not cited to anywhere in the prior art is suggested where a protrusion may be formed on a metal electrode. As previously discussed, and left unrebutted by the Examiner, Lien teaches away from the use of such materials. Any reference which teaches away from the present invention cannot be properly used as a basis for an obviousness rejection. Furthermore, nowhere has the Examiner cited to anywhere in the prior art where is suggested a first projection on a first electrode and a second projection on a second electrode, and having a separation between the two different electrodes which is part of the pixel. Section 2143.03 of the MPEP requires that all claim limitations must be taught or suggested by the prior art in order to establish a *prima facie* case of obviousness. Because all of the aforementioned claim features of the present invention are not taught or suggested within the cited prior art, the Section 103 rejection of claim 1 is respectfully traversed for at least these reasons.

Moreover, the features of the present invention discussed above provide advantages not realized by the cited prior art references. By forming projections on opaque metal electrodes, it is possible to avoid adverse effects to the optical characteristics by projections formed on the display areas of the display panel, as seen in Lien, for example. The transparent conductive projections taught by Lien are specifically disclosed to be provided on the pixel region, and therefore cannot realize these advantages of the present invention. Accordingly, the Section 103 rejection of claim 1 is further traversed for these additional reasons.

Furthermore, it is not enough to establish a case of obviousness merely to pick and choose features from different prior art references. To maintain a rejection based on obviousness, there must also be some suggestion within the prior art itself for a *combination* of the references. See In re Lee, 277 F.3d 1338. Without some suggestion for the combination itself, the mere picking and choosing of different features from different prior art references amounts to an impermissible use of hindsight. In the present case, the Examiner has cited to nowhere in the prior art which suggests combining all three cited references. Accordingly, for at least these reasons as well, the Section 103 rejection of claim 1 is again respectfully traversed.

Claim 4 again stands rejected under 35 U.S.C. 103(a) as being unpatentable over the AAPA in view of Rieger et al. (U.S. 6,180,026). Applicants again respectfully traverse this rejection for the reasons of record, and as follows. As previously discussed, Rieger is drawn to a twisted nematic ("TN") device which exhibits positive dielectric anisotropy. The present invention, on the other hand, is drawn to a vertical alignment ("VA") device which exhibits positive dielectric anisotropy. As such, the Rieger reference specifically teaches away from the actual recited claim language of claim 4 of the present invention. As discussed above, a prior art reference which teaches away from the present invention cannot form the basis of a rejection based on obviousness. The Examiner's response on page 9 of Paper No. 14, with regard to this issue, fails to rebut these previously made arguments.

As previously argued, TN devices and VA devices operate on different principles, and VA devices are known to provide distinct advantages over TN devices in some areas because of these differences. The two different technologies may not simply be combined, as suggested by the Examiner in his response. Furthermore, nowhere have Applicants suggested that a VA device may be substituted for a TN device merely because a VA device has faster switching times, as implied by the Examiner. Because the Rieger reference neither teaches nor suggests that its birefringence disclosure may be adapted to a VA device, the Section 103 rejection of claim 4 of the present invention is respectfully traversed.

Claim 5 again stands rejected under 35 U.S.C. 103(a) as being unpatentable over the AAPA and Rieger, and further in view of Weber et al. (U.S. 5,374,374). Applicants again respectfully traverse this rejection for the reasons of record, and because claim 5 is dependent from independent claim 4, which is traversed above. Furthermore, like Rieger, Weber teaches only TN devices which, as discussed above, teach away from the present invention, and therefore defeat the inclusion of the Weber reference as a basis for an obviousness rejection against claim 5 of the present invention.

Claim 6 of the present invention again stands rejected under 35 U.S.C. 103(a) as being unpatentable over the AAPA in view of Walton, Lien, and Yoshida et al. Applicants respectfully traverse this rejection for the reasons of record, and as follows.

Similar to claim 1 of the present invention, claim 6 also features separate first and second electrodes formed of metal. As discussed above, none of the AAPA, Walton, or

Lien references teach or suggest these features of the present invention as claimed. Yoshida is cited merely for teaching the uniform pre-tilt of liquid crystal molecules over an entire area of a pixel, and fails to teach or suggest anything regarding electrodes formed of metal. For at least these reasons, the Section 103 rejection of claim 6 is respectfully traversed.

Additionally, the Examiner has failed to respond to any of the specific arguments from Amendment B demonstrating how Yoshida fails to teach or suggest any selective pre-tilt to first and second regions of a molecular alignment film, as in the present invention. In fact, Yoshida teaches away from the present invention by requiring a uniform pre-tilt over the *entire area* of the pixel, and not to selective regions within the pixel. Because the Examiner has failed to even respond to these specific arguments, the Section 103 rejection of claim 6 should be withdrawn for at least these reasons.

Accordingly, Applicants submit that this Application, including claims 1 and 4-6, is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

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February 17, 2003

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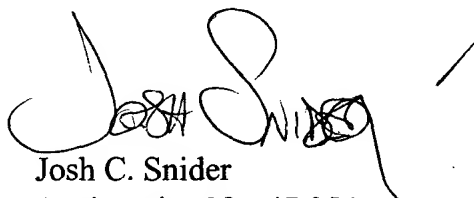
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By

  
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